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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,604	07/24/2001	Robert Brooks JR.	1662-36300 JMH (P00-3509)	7189
23505	7590	04/22/2005	EXAMINER FLANDERS, ANDREW C	
CONLEY ROSE, P.C. P. O. BOX 3267 HOUSTON, TX 77253-3267			ART UNIT 2644	PAPER NUMBER

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,604

Applicant(s)

BROOKS ET AL.

Examiner

Andrew C Flanders

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2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) 10-14, 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. **Claims 15 and 16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. The term "type" in **claims 15 and 16** are a relative term which renders the claim indefinite. The term "type" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purpose of expediting prosecution the term type will be understood to mean an analog or digital audio device.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 2 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dell (OptiPlex GX1p Installation guide) in view of Sound Blaster (Sound Blaster Live! Player 5.1 User Guide) and in further view of Baker (U.S. Patent 6,185,627).

Regarding **Claim 1**, Dell discloses a system with an Intel Pentium II microprocessor (page 1-1) (i.e. a processor), up to 384 MB of system memory (page 1-2) (a system memory coupled to said processor), a USB which a mouse or keyboard can be connected to (page 1-2) (i.e. at least one input/output coupled to said processor), a speaker (page 2 – 18) (i.e. an internal audio speaker device). Dell does not disclose an audio controller circuit that transmits digital audio signals or analog audio signals to the internal audio speaker or to external audio playback devices coupled to the computer via a plurality of output connectors; wherein the audio controller circuit determines whether each device is analog or digital for the purpose of transmitting corresponding analog or digital audio signals to each device. Sound Blaster discloses a sound card that transmits sound to multiple output connectors (page 1-4). Sound Blaster does not explicitly disclose using the sound card to control the internal speaker disclosed by Dell. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Sound Blasters audio card to control this speaker. Dell discloses an onboard audio controller that controls this speaker and it using Sound Blasters audio card would have been obvious due to the similarities in the hardware (page 1-4) (i.e. an audio controller that transmits digital or analog audio signals to the internal audio speaker or to external audio playback devices coupled to the computer via a plurality of output connectors). It would have been obvious to add Sound Blaster sound card to Dell's computer in order to allow the computer to transmit high quality sound. Dell's system includes PCI slots (page 3-1) that are capable of adding Sound Blaster sound

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card. Adding this card is merely one of many available upgrades that were available commercially at the time of the invention and notoriously well known by one of ordinary skill in the art. Moreover, neither Dell nor Sound Blaster discloses wherein the audio controller circuit determines whether each device is analog or digital for the purpose of transmitting corresponding analog or digital audio signals to each device. Baker discloses a sound card that detects the type of speaker system attached and sends analog or digital signals accordingly (Fig. 10) (i.e. wherein the audio controller circuit determines whether each devices is analog or digital for the purpose of transmitting corresponding analog or digital signals to each device). One of ordinary skill in the art at the time of the invention would have been motivated to add Baker's speaker detection to Sound Blaster's sound card in order to prevent loss in fidelity of the digital signals when digital speakers are attached to the system. See Baker col. 4 lines 63 – 67 and col. 1 lines 44 – 48).

Regarding **Claim 2**, in addition to the elements stated above regarding claim 1, Sound Blaster discloses switching between a digital mode or an analog mode (page 1-4 and 3-4) (i.e. audible sounds are transmitted to and reproduced by one playback device at a time). Sound Blaster does not disclose wherein the audio controller circuit detects the device type for that one playback device and transmit analog or digital signals as required for that device. Baker discloses a sound card that detects the type of speaker system attached and sends analog or digital signals accordingly (Fig. 10) (i.e. wherein the audio controller circuit detects the device type for that one playback device and transmit analog or

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digital signals as required for that device). One of ordinary skill in the art at the time of the invention would have been motivated to add Baker's speaker detection to Sound Blaster's sound card in order to prevent loss in fidelity of the digital signals when digital speakers are attached to the system. See Baker col. 4 lines 63 – 67 and col. 1 lines 44 – 48).

Regarding **Claim 7**, Sound Blaster discloses an audio card that outputs and digital streams (pages 1-2 and 1-4) (i.e. a digital audio controller that generates digital audio signals reproducible by a digital audio device) an analog mode (page 1-4) for connecting the output of the sound card to an analog 5.1 channel speaker system (page 1-6) (i.e. a mixed-signal codec that communicates with the digital audio controller and generates analog audio signals reproducible by an analog audio device) and multiple audio outputs (page 1-4) (i.e. a plurality of audio output connectors, each configured to accept a mating connector coupled to an external audio device). Sound blaster does not disclose a programmable logic device, switching circuitry or wherein the audio controller circuit detects whether an external audio device coupled to an audio output connector is an analog or digital device and transmit either analog or digital audio signals to any of the output connectors. Dell discloses a system with an Intel Pentium II microprocessor (page 1-1) (i.e. a programmable logic device). It would have been obvious to add Sound Blaster sound card to Dell's computer in order to allow the computer to transmit high quality sound. Dell's system includes PCI slots (page 3-1) that are capable of adding Sound Blaster sound card. Adding this card is merely one of many available upgrades that were

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available commercially at the time of the invention and notoriously well known by one of ordinary skill in the art. Moreover, neither Dell nor Sound Blaster disclose, switching circuitry or wherein the audio controller circuit detects whether an external audio device coupled to an audio output connector is an analog or digital device and transmit either analog or digital audio signals to any of the output connectors. Baker discloses a sound card that detects the type of speaker system attached and sends analog or digital signals accordingly (Fig. 10) (i.e. a switching circuitry; and wherein the audio controller circuit determines whether each devices is analog or digital for the purpose of transmitting corresponding analog or digital signals to each device). One of ordinary skill in the art at the time of the invention would have been motivated to add Baker's speaker detection to Sound Blaster's sound card in order to prevent loss in fidelity of the digital signals when digital speakers are attached to the system. See Baker col. 4 lines 63 – 67 and col. 1 lines 44 – 48).

5. **Claims 3 – 6, 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dell (OptiPlex GX1p Installation guide) in view of Sound Blaster (Sound Blaster Live! Player 5.1 User Guide) and in further view of Baker (U.S. Patent 6,185,627) and in further view of Live! IR (Live! Drive IR Quick Start).

Regarding **Claim 3** in addition to the elements stated above regarding claim 1, Sound Blaster discloses a Line out which transmits audio to various devices (page 1-4) (i.e. a rear audio connector; and wherein audio signals are transmitted by the audio controller circuit for playback by one of either the

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internal speaker device or a playback device coupled to the rear connector or a playback device coupled to the front audio connector). Sound Blaster does not disclose a front audio connector. Live! IR discloses multiple outputs via a front panel (pages 1 and 3) (i.e. a front audio connector). It would have been obvious to one of ordinary skill in the art at the time of the invention to add Live! Drive IR to Sound Blaster's sound card. It is merely one of a variety of peripherals that can be attached. Sound Blaster shows a connection to the Live! Drive IR on page 1-4.

Regarding **Claim 4**, in addition to the elements stated above regarding claim 3, Live! IR discloses setting the system to mute all outputs when a headphone is connected (page 14) (i.e. when playback devices coupled to the front connector have playback priority over playback devices coupled to the rear connector and the internal speaker device). Live! IR does not explicitly disclose that the rear connector has playback priority over the internal speaker device. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the sound card as disclosed by Sound Blaster in order to mute the internal speaker when rear audio inputs are attached (i.e. playback devices coupled to the rear connector have playback priority over the internal speaker device). It is well known in the art that many PC systems come with an integrated internal speaker along with a set of desktop speakers. Due to their proximity and the usually low quality of the internal speaker, it would have been obvious to one of ordinary skill in the art at the time of the invention to mute the internal speaker when rear outputs are attached in order to prevent poor sound

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quality such as reverberation, reflection and any other problems associated with multiple speaker systems and the poor quality of the internal speaker.

Regarding **Claim 5**, in addition to the elements stated above regarding claim 4, the Baker art discloses a sound card that detects the type of speaker system attached and sends analog or digital signals accordingly (Fig. 10) (i.e. wherein the audio controller circuit determines whether each devices is analog or digital for the purpose of transmitting corresponding analog or digital signals to each device). The nature of the combination is such that the sound card performs all of the audio processing. As such when devices are connected to either the front or rear connects a determination is made to whether the sources are analog or digital and audio is output accordingly (i.e. wherein the audio controller circuit determines whether to transmit analog or digital signals under the following conditions: a) when a playback device is coupled to or removed from the front connector; and b) when no playback device is coupled to the front connector and a playback device is coupled to or removed from the rear connector).

Regarding **Claims 6 and 8**, in addition to the elements stated above regarding claims 5 and 7, Sound Blaster does not explicitly disclose using the sound card to control the internal speaker disclosed by Dell. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Sound Blasters audio card to control this speaker. Dell discloses an onboard audio controller that controls this speaker and it using Sound Blasters audio card would have been obvious due to the similarities in the hardware. Moreover, if no

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devices are connected to the front or rear outputs, it would be obvious by default to use the internal PC speaker to transmit audio (i.e. if no external playback device is coupled to the computer system, the audio controller circuit transmits analog audio signals for playback by the internal speaker device).

Regarding **Claim 9**, in addition to the elements stated above regarding claim 8, in addition to the elements stated above regarding claim 1, Sound Blaster discloses a Line out which transmits audio to various devices (page 1-4) (i.e. a rear audio connector). Sound Blaster does not disclose a front audio connector and wherein if the front output connector is coupled to an external audio device, the audio control circuit: asserts a first mute signal to mute the rear output connector; and asserts a second mute signal to mute the internal analog output; and wherein if the front output connector is not coupled to an external audio device and the rear output connector is coupled to an external audio device, the audio controller circuit: asserts the second mute signal to mute the internal analog output. Live! IR discloses multiple outputs via a front panel (pages 1 and 3) (i.e. a front audio connector), setting the system to mute all outputs when a headphone is connected (page 14) (i.e. wherein if the front output connector is coupled to an external audio device, the audio controller circuit: asserts a first mute signal to mute the rear output connector; and asserts a second mute signal to mute the internal analog output). It would have been obvious to one of ordinary skill in the art at the time of the invention to add Live! Drive IR to Sound Blaster's sound card. It is merely one of a variety of peripherals that can be attached. Sound Blaster shows a connection to the Live!

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Drive IR on page 1-4. Live! IR does not explicitly wherein if the front output connector is not coupled to an external audio device and the rear output connector is coupled to an external audio device, the audio controller circuit: asserts the second mute signal to mute the internal analog output. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the sound card as disclosed by Sound Blaster in order to mute the internal speaker when rear audio inputs are attached (i.e. wherein if the front output connector is not coupled to an external audio device and the rear output connector is coupled to an external audio device, the audio controller circuit: asserts the second mute signal to mute the internal analog output). It is well known in the art that many PC systems come with an integrated internal speaker along with a set of desktop speakers. Due to their proximity and the usually low quality of the internal speaker, it would have been obvious to one of ordinary skill in the art at the time of the invention to mute the internal speaker when rear outputs are attached in order to prevent poor sound quality such as reverberation, reflection and any other problems associated with multiple speaker systems and the poor quality of the internal speaker.

Regarding **Claim 15**, Live! Drive IR discloses muting all of the other sources when headphones are attached (page 14) (i.e. ranking the audio outputs in terms of playback priority, transmitting audio signals from an audio controller circuit to the highest priority audio output to which an audio device is coupled and wherein if a playback device is removed from the audio output to which audio signals are currently being transmitted). It is obvious that if a secondary output is

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being used, when the headphones are inserted, the secondary output will be shut off (i.e. if a playback device is plugged into a higher priority output). It would have been obvious to one of ordinary skill in the art at the time of the invention to add Live! Drive IR to Sound Blaster's sound card. It is merely one of a variety of peripherals that can be attached. Neither Sound Blaster nor Live! Drive does disclose determining the device type for the audio device coupled to the highest priority audio output and transmitting the appropriate analog or digital audio signals to that output. Baker discloses a sound card that detects the type of speaker system attached and sends analog or digital signals accordingly (Fig. 10) (i.e. wherein the audio controller circuit determines whether each device is analog or digital for the purpose of transmitting corresponding analog or digital signals to each device). One of ordinary skill in the art at the time of the invention would have been motivated to add Baker's speaker detection to Sound Blaster's sound card in order to prevent loss in fidelity of the digital signals when digital speakers are attached to the system. See Baker col. 4 lines 63 – 67 and col. 1 lines 44 – 48).

Regarding **Claim 16**, in addition to the elements stated above regarding claim 15, the prior art referenced does not explicitly disclose generating an interrupt to indicate to the computer system that a device type must be determined. However, Dell teaches of setting interrupts for various computer devices (page 3-9 and 3-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use interrupts to inform the computer to determine which device is connected. It is merely one of the many possible

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straightforward implementations that could be used to alert the system of a device being connected.

Allowable Subject Matter

Claims 10 – 14 and 17 - 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SINH TRAN
SUPERVISORY PATENT EXAMINER

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